DECEMBER
1969

45¢

Live Steam

THE MONTHLY MAGAZINE FOR ALL LIVE STEAMERS AND LARGE-SCALE MODEL RAILROADERS

in this issue

Live Steam Meets Construction

Shop Kinks

Prototype

Live Steam
magazine
DECEMBER 1969 VOL. 3 NO. 12

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COVER PHOTO

The 1½" scale NYC Hudson belonging to Warren Jackson of Rockford, Illinois, as seen on the Iowa Model Steam Engineers' track during that club's Fall Meet. Photo by H. E. Brakke.

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Address all mail to

LIVE STEAM
Post Office Box 535
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The Future of Live Steam

by John Matlock, President
Caldwell Industries

The Live Steam hobby in the United States has reached an awkward stage. Like the teenager who is "too old to cry, too young to cuss", Live Steam seems to be at a size where it is too big to be ignored, but too small to do much about.

As a businessman, I must consider which tracks to lead CALDWELL down. As such, it is necessary that I look at all alternatives that are open. I am hoping that as fellow Live Steamers you may be interested in my thoughts.

Firms like mine must allocate resources where they can generate the best return for their investors' money, never spending money "foolishly" in some "silly" hobby. Likewise, once committed to a course of action, resources commensurate with expected return are available.

You, as Live Steamers, may be interested in how you would benefit if CALDWELL could justify some fairly large expenditures in the Live Steam field. One thing I would like to do is come out with a truly bolt-together kit. The lost wax and die casting processes are available which will produce castings accurate to about .005". This is within allowable tolerance levels to build a locomotive, if these tolerances are taken into effect when the design is made. Likewise, forms could be made to "mass produce" boilers. If this were applied to a "family" of locomotives, such as the USRA engines which have many interchangeable parts, quite a product line would result.

Without a considerable growth in the hobby during the next few years, the expenses necessary to accomplish this little project cannot be justified.

How are we going to get there? What can we do today? What can I start this year so that ten years from now the 1980 CRAFTSMANSHIP CATALOG can contain items such as these?

The growth must come from the youth – youths who have never seen a high-stepping Atlantic, who will never see a straining articulated, who have never smelled hot cylinder oil.

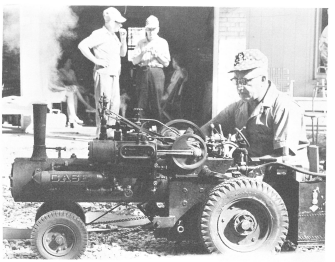
CALDWELL INDUSTRIES is aiming several marketing plans to the schools. The youngster taking a metal-working shop class has the time and equipment necessary to build something. Last year, CALDWELL developed the oscillating cylinder engine pictured here with this young man in mind. It is a simple engine. It's hard to make it *not* run. It runs well on compressed air. The student should have no trouble getting it built in a semester, and if he does this, I'll lay odds that he's one of ours now! If so, a locomotive or traction engine will follow.

The problem is getting the information about our engines to the right people. We are advertising, with some success, in the vocational arts trade journals. But this kind of advertising is not enough. Personal Live Steam endorsement is what we need – Live Steamers talking to shop teachers in their own area explaining what this fine hobby offers.

This is your part. Talk to the shop teacher in your community. Show him LIVE STEAM Magazine and a couple of catalogs. If he will drop us a note on school letterhead, we'll send him a catalog free of charge.

Probably he'll be interested and very glad to talk to you. His job is teaching, and he is always looking for projects that his students will enjoy. Invite him and a few students out to see your locomotive and just watch their enthusiasm grow. You could arrange to send LIVE STEAM Magazine to the shop or school library in your name.

If you can get one teacher interested in Live Steam projects, I'll guarantee you an unbelievable choice of new products in a very few years. Teamwork can insure a bright future for all Live Steam enthusiasts. Are you willing to do your part?



Fall Meet in Iowa

by P. G. "Scotty" Scott

The Iowa Model Steam Engineers held their annual Fall Meet on June 6th and 7th with the finest of weather! Live Steamers began arriving Thursday and by Saturday 16 engines were on hand and operating under clear skies and perfect fall temperature.

Twelve ¾" scale engines and four 1½" scale engines ranging from 0–4–0's to a 4–8–8–4 were on hand ...plus Jim Ridenour and his 3" scale Case traction engine (2). The 3½"–1" facilities saw a lot of action for two days and the steaming bays (3) were filled to capacity for the first time since the new track was built.

The 1½" track also was active and Warren Jackson's 4–6–4 was a highlight (1) here. This engine, built by the late Clarence LaCaeyse, is not only a beautiful piece of machinery but performs as well. Most everyone had a turn running this fine loco and all were left in awe and amazement on the performance.

Ted Young's 4–8–8–4 had its first workout on a continuous track and proved itself very well. The 0–4–0's, the 4–8–4's and all in between gave a good perfomance, too.

Over 100 were registered from Ohio, Michigan, Indiana, Missouri, Arkansas, Nebraska, Minnesota, Wisconsin and Colorado. After a dinner and business meeting at the Town Hall, everyone was looking forward to the meets in the 1970 season!

PHOTOS: H. E. BRAKKE

The Pere Marquette's Pacifics

Prepared from data supplied by
Philip F. Geary, Jr.
Richard D. Orlik
Philip A. Shuster
Alvin F. Staufer
Henry J. Walhout

The Baldwin Locomotive Works never did get entrenched in the Pere Marquette's motive power department for some reason. Other than a few Baldwin-built (1897) 0–6–0 switchers that came into the roster at the formation of the company in 1899, the PM had purchased only fifteen 2–8–0's (1905) from the then leading producer of steam locomotives.

Into this Alco stronghold, though, came ten 2–8–2's (#1001–1010 Class MK) in 1913, followed by five new Pacifics in 1914 which were numbered 725 through 729, designated Class SP–2 and carried Baldwin's construction numbers 41310 through 41314. . . . and what a difference there was between those five new 4–6–2's and the ten already on the roster!

Powerful? Sure! With an increase of nearly six inches in the boiler diameter, nearly 1,000 square feet of additional heating surface (1,200 additional square feet when the superheater was included), 12 square feet added to the grate area, increases of 3" in the diameter of the piston valves and 3" in the cylinder bore – these new brutes produced a whopping 38,700# Tractive Power, bettering by 40% the previous Pere Marquette Pacifics!

Big? Scare again! They stood 6" taller, 6" wider and eight feet longer than the P–2 and SP Classes. These new engines (without their tenders) weighed 41,000# more – 25% more than their elder counterparts!

Beautiful? Well – here your editor would have to emphasize the question mark. Now please don't misinterpret that! Heading out of town with a string of the Pere Marquette's Pullman green passenger equipment, the sight would add a couple beats to any railfan's pulse and these engines were impressive enough to head anyone's passenger train. But, set one of these new SP–2's alongside one of the earlier PM Pacifics and, well . . . this writer's heart would just automatically make a "right turn" towards the P–2 or SP! The new engines couldn't be classified as "typically Baldwin" in appearance. The bigger cylinders bulged more perceptibly over smaller lead truck wheels. The smaller drivers were emphasized by high-mounted running boards. They gave the impression of a compromise between engines that the Pere Marquette might have designed and what someone at Baldwin thought the PM needed.

But they, too, served well and could handle any train that a reasonable management would assign to them.

By the mid-1940's, though, many changes were taking place on the Pere Marquette. On June 6th, 1947, the Pere Marquette merged with the Chesapeake & Ohio which had controlled the PM since 1929. The PM's first EMD E–7's had, at merger time, been on the premises a year and proved themselves capable to the point where an additional six of the big growlers were purchased between April and August of 1947 – signalling the end of steam power on the PM's passenger runs. The C&O had been a little reluctant to get involved in the swing to diesels and, after the merger, the powerful SP–2's were quickly transferred from the Pere Marquette District to the Chesapeake District where passenger engines were needed.

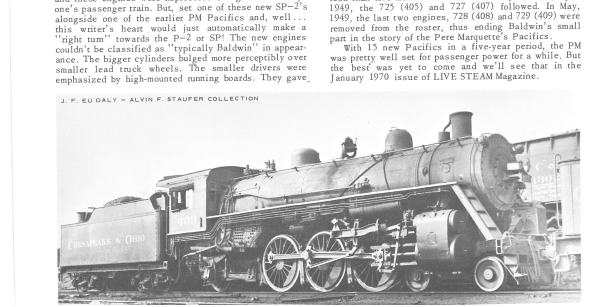
On December 12th, 1947, the 726, 727 and 728 were transferred, assigned C&O Class F–12 and renumbered 406, 407 and 408 respectively. According to Alvin Staufer's book, *C&O POWER* (now out of print), they were used on Columbus - Toledo trains 35 and 36.

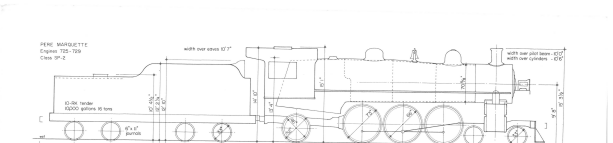
On January 4, 1948, the 725 (renumbered C&O 405) was transferred and on January 8, 1948, the 729 (renumbered 409) followed. Both of these engines served on passenger locals in West Virginia, although the 729 (409) finally found its way, too, to Columbus, Ohio.

The new lease on life, though, was short-lived. Engine 726 (406) was retired first – in April 1948 – after less than five months on C&O rails. A year later, April 1949, the 725 (405) and 727 (407) followed. In May, 1949, the last two engines, 728 (408) and 729 (409) were removed from the roster, thus ending Baldwin's small part in the story of the Pere Marquette's Pacifics.

With 15 new Pacifics in a five-year period, the PM was pretty well set for passenger power for a while. But the best was yet to come and we'll see that in the January 1970 issue of LIVE STEAM Magazine.

J. F. EU DALY – ALVIN F. STAUFER COLLECTION





PROTOTYPE SPECIFICATIONS

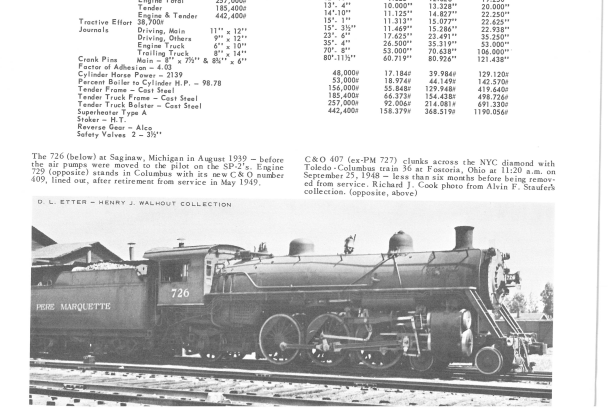
Cylinders	25" x 28"
Valves	15¼" Piston Valves, 6½" travel
	1-1/8" lap, ¼" lead, 3/16"
	exhaust clearance
Valve Gear	Walschaerts
Boiler	Pressure – 190# p.s.i.
	Tubes – 239 2" o.d.
	Flues – 32 5-3/8" o.d.
	Length – 20' 6"
	Arch Tubes – 4 3" o.d.
	Superheater Tubes – 116" o.d.,
Firebox	Length – 126-1/16"
	Width – 84-1/8"
	Grate Area – 56.0 sq. ft.
Heating Surfaces	Tubes and Flues 3473 sq. ft.
	Firebox 225 sq. ft.
	Arch Tubes 30 sq. ft.
	TOTAL 3728 sq. ft.
	Superheater 765 sq. ft.
	TOTAL 4493 sq. ft.
Weight in Working Order	
	Engine Truck 53,000#
	Drivers 156,000#
	Trailing Truck 48,000#
	Engine Total 257,000#
	Tender 185,400#
	Engine & Tender 442,400#
Tractive Effort	38,700#
Journals	Driving, Main 11" x 12"
	Driving, Others 9" x 12"
	Engine Truck 6" x 10"
	Trailing Truck 8" x 14"
Crank Pins	Main – 8" x 7½" & 8¼" x 6"
Factor of Adhesion – 4.03	
Cylinder Horse Power – 2139	
Percent Boiler to Cylinder H.P. – 98.78	
Tender Frame – Cast Steel	
Tender Truck Frame – Cast Steel	
Tender Truck Bolster – Cast Steel	
Superheater Type A	
Stoker – H.T.	
Reverse Gear – Alco	
Safety Valves 2 – 3½"	

LIVE STEAM CONVERSIONS

Prototype	Scale 3/4" = 1'0"	Scale 1" = 1'0"	Scale 1½" = 1'0"
25"	1.563"	2.083"	3.125"
28"	1.750"	2.332"	3.500"
33"	2.063"	2.750"	4.125"
46"	2.875"	3.832"	5.750"
52"	3.250"	4.332"	6.500"
56½"	3.531"	4.707"	7.062"
58"	3.625"	4.831"	7.250"
66"	4.125"	5.498"	8.250"
67"	4.188"	5.581"	8.375"
70"	4.375"	5.831"	8.750"
70-5/8"	4.414"	5.883"	8.828"
73"	4.563"	6.081"	9.125"
78"	4.875"	6.497"	9.750"
84"	5.250"	6.997"	10.500"
9'- 8"	7.250"	9.663"	14.500"
10'- 0"	7.500"	10.000"	15.000"
10'- 4½"	7.781"	10.371"	15.563"
10'- 6"	7.875"	10.496"	15.750"
10'- 7"	7.938"	10.579"	15.875"
11'-10"	8.875"	11.829"	17.750"
12'- 2½"	9.141"	12.183"	18.281"
12'-10"	9.625"	12.828"	19.250"
13'- 4"	10.000"	13.328"	20.000"
14'-10"	11.125"	14.827"	22.250"
15'- 1"	11.313"	15.077"	22.625"
15'- 3½"	11.469"	15.286"	22.938"
23'- 6"	17.625"	23.491"	35.250"
35'- 4"	26.500"	35.319"	53.000"
70'- 8"	53.000"	70.638"	106.000"
80'-11½"	60.719"	80.926"	121.438"
48,000#	17.184#	39.984#	129.120#
53,000#	18.974#	44.149#	142.570#
156,000#	55.848#	129.948#	419.640#
185,400#	66.373#	154.438#	498.726#
257,000#	92.006#	214.081#	691.380#
442,400#	158.379#	368.519#	1190.056#

The 726 (below) at Saginaw, Michigan in August 1939 – before the air pumps were moved to the pilot on the SP-2's. Engine 729 (opposite) stands in Columbus with its new C & O number 409, lined out, after retirement from service in May 1949.

C&O 407 (ex-PM 727) clunks across the NYC diamond with Toledo-Columbus train 36 at Fostoria, Ohio at 11:20 a.m. on September 25, 1948 – less than six months before being removed from service. Richard J. Cook photo from Alvin F. Staufer's collection. (opposite, above)



LAYOUT for the apprentice

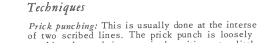
by Jack D. McKenty, M.D.

Part 2

Techniques

Prick punching: This is usually done at the intersection of two scribed lines. The prick punch is loosely held, touching the work in a vertical position, at a little distance from the intersection. It is gently drawn toward one of the scribed lines. You will feel a little click as it drops into the groove left by the scriber. Then draw it along the line; there will be another little click at the intersection. Making sure it is absolutely vertical, fetch it a biff with the hammer.

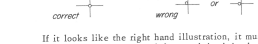
Then inspect the punch mark (with the loupe if you want to feel very professional). It should look like the left hand illustration.



If it looks like the right hand illustration, it must be moved over. Put the point of the punch back in the hole and hold the punch at an angle, aiming it the way the punch mark should be moved. Hit it again with the hammer, and finally hit it one more time with the punch vertical. You will learn with practice the angle to hold it and how hard to hit it.

Center punching: This is easy. The center punch is fitted into the hole left by the prick punch, held absolutely vertical, and whacked with the hammer. It is usually best not to do any center punching until all other layout work has been completed. If you center punch a mark which must be used again as a starting point for marking off another dimension, the point of the dividers will rattle around in the hole. This decreases accuracy.

Scribing: The rule or blade of the square is held flat and tight against the work, and the scriber is drawn along it at an angle, so that only the point of the scriber is touching the guiding surface.



When scribing a line between two punch marks, put the scriber in one of the marks and bring the straight edge (rule or blade of the square) up to it. Use it as a fulcrum to swing the straight edge into line with the other mark. Check the position of the straight edge at the other mark by putting the scriber in the mark. Alternate the scriber between the two marks until it centers in the hole and touches the straight edge in each of them.

Scribe the line starting before the first mark and ending after the second. You should feel the scriber drop into each punch mark on the way by.

The Hermaphrodite calipers: To set them, have a rule flat on the surface plate, hold the caliper leg against the end of the rule, and turn the adjusting screw so that the pointed leg drops into the desired mark on the rule. This is one of the things that makes good rules expensive; the end of the rule is exactly 1" from the one inch mark. On cheap rules, this isn't so.

To use them, hold the caliper leg against the edge of the work, with the pointed leg against the surface of the work. Drag it along so the pointed end acts as a scriber. Be careful to keep the line of the two legs at right angles to the edge of the work.

An edge of the work, if possible, should be used as a "datum line", from which as many other measurements as possible are taken. It is worthwhile to saw and file one edge of the workpiece flat and straight before starting, since laying out is much easier from an edge than in the middle of a surface.

The Dividers: To set them, set one leg in the one inch mark on the rule, and adjust the adjusting nut that the other leg drops into the desired mark on the rule. Remember to allow for having started at the one inch mark. It is surprising how easy it is to set a measurement one inch short of what it should be, and how embarrassing.

To use them, put one leg in a prick punch mark, and use the other leg as a scriber. If you have a number of identical measurements to lay out, check the dividers against the rule before each one; the dividers can change their setting, especially for short measurements.

If you have to lay out a long measurement as a series of steps, readjust the dividers for each step, coming down the mark on the rule for one adjustment and up to it for the next. Alternating in this way will help to cancel any errors in adjustment. Not adjusting the dividers between steps allows any setting errors to accumulate.

Witness marks: If a scribed line is to become an edge on the finished work, it is worthwhile to make a series of prick punch marks at intervals along it. Filing to a line can be tricky, since the line seems to disappear before you get to it. The punch marks remain as visible "witnesses", and when each of them is only half a punch mark, you are at the right place.

Similarly, if a large diameter hole is to be drilled in the work, scribe a circle around it with the dividers set at the radius of the hole and punch witness marks around the circle. The ideal is to have the edge of the finished hole cut each mark in half.

Laying out with a rule: Placing the rule directly on the work and scratching marks opposite the desired measurements is hopelessly inaccurate and should not be considered.

If you must play cheap and dirty, do it this way: For example, to measure 1½":

Look with only one eye, directly above the 1½" mark, and adjust the rule so the datum line bisects the center of the mark, on each edge of the rule. Use the end of the rule as a straight edge for the scriber.

If you want to use the rule in the middle of the work, the heck with you!

Geometry: I am not going to include any of the simple geometric constructions, such as "to construct a line at right angles to a given line, passing through a given point", or "to bisect an angle" since these things have been thoroughly covered in high school. If there is a demand for them, they can be discussed in a future article.

PART ONE

THE TENDER

For the benefit of the unitiated, a tender is, in most instances, a car that is coupled to the rear of the locomotive and carries a supply of boiler water and fuel. In general, the Live Steam locomotive tender has an additional function which is also to be a riding car for the engineer. 3/" scale appears to be the breaking point where one will find the engineer riding the tender in some localities, and in other localities, he will ride a flat car behind the tender the same as the engineer does on ½" scale: controlling the throttle and feed water by rods reaching to the back of the tender. Many railroaders referred to the tender as "the tank"; however, this was a term used by the older generation of railroaders and was not used by the engineering departments of the locomotive manufacturers.

Exceptions to the tender being coupled directly behind the locomotive were the saddle tankers, side tankers, suburbans, and most geared locomotives which carried their fuel and feed water on the locomotive. Variations of this practice are where the fuel is carried on the locomotive and the water tank is carried on an auxiliary truck which is driven by the engine through the common drive shaft. This was common on 3-truck and 4-truck Shay locomotives. Since this chapter will only deal with the tender that is pulled by the locomotive, these various versions of the so-called "tenderless"; locomotive will be ignored, although many manufacturers did refer to the fuel and feed water compartment on a locomotive as a tender.

Since tenders are strictly functional cars dedicated to a single purpose, it is natural to suppose that for a certain type of service, a certain type of tender would be used. Up until about 1920, this was pretty much so. However, as time went on, tenders became larger and larger and the second line locomotives got the hand-me-downs that were, in effect, larger than the ones that they were originally equipped with. An excellent example of this was the slope-back tender that was at one time universally used on switchers. The slope-back tender was ideal for switching since it gave the engineer an excellent view to the rear when backing, which was done about half the time when switching. Long before the end of steam, many 6-wheel switchers had fallen heir to either rectangular or Vanderbilt tenders fomerly coupled to road locomotives. When the Southern Pacific equipped many of their 6-wheel switchers with hand-me-down Vanderbilt tenders, the rectangular fuel oil tank was narrowed to approximately the same diameter as the cylindrical water tank. This assisted the engineer when backing. When some of the Southern Pacific early Atlantics were scrapped and some of the early cab-forward Mallets were given larger tenders, the turtle-back tenders that they were originally equipped with were given to switchers and local freight locomotives. These turtle-back tenders were ideal for switching since they gave a clear view to the rear and held a good supply of water and fuel oil. However, due to their odd shape, they are not practical for Live Steam.

GENERAL TYPES OF TENDERS

SLOPE-BACK TENDER

This was the switcher tender. Its low sides provided a good view to the rear and the slope-back provided the switchman with easy access to the locomotive cab from the tender footboards. Due to its low sides and slope-back, its fuel and water capacity was very much limited. This meant more trips to the water spout and the fuel supply. These tenders are used to some extent on Live Steam, but due to the visible supports for the engineer's seat spoiling the slope-back and the limited fuel and water supply, they never have become very popular for Live Steam switchers. Their small top deck does create some problems for the installation of the hand pump.

RECTANGULAR TENDERS

This was the standard type of tender used with passenger and freight locomotives. Its range ran from the small early pre-Civil War tenders to the mammouth long distance tenders with 8-wheel trucks used on the Santa Fe, Pennsylvania and other roads. They were built for

both coal and fuel oil. The different versions of this general type are most commonly used for Live Steam since the rectangular shape with its relatively large expanse of flat top area provides space for the engineer's seat in the 3/4", 1" and small 1½" scale locomotives. The tenders used on large 1½" scale locomotives may be almost any type since the engineer's seat space is usually borrowed from the fuel space. This is no problem on the large 1½" scale tenders since with a coal burner the engineer usually has foot rests on the outside of the tender similar to the 3/4" and 1" scale tenders. Where the tender is for an oil burner, the engineer usually has his seat on top of the oil tank and puts his feet inside the tender in front of the fuel tank.

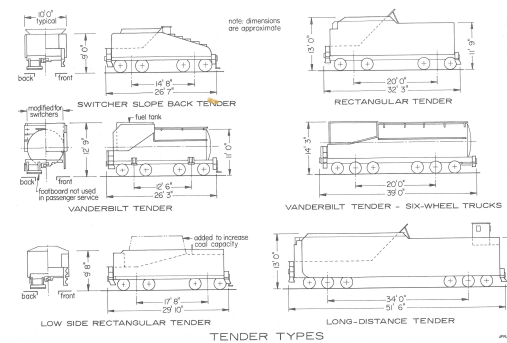
VANDERBILT TENDERS

These tenders were characterized by their square fore fuel section and cylindrical rear water section. They were used with passenger and freight locomotives and were introduced on the Harriman Lines for oil burning locomotives about 1904 (U.P., S.P., O.S.L., etc.). The Vanderbilt tender was also used to some extent with coal-burning locomotives on the B&O, C&O, Erie, Canadian National, and others. For oil burning locomotives, the Vanderbilt tender basic design lent itself to modification for switchers. When the Southern Pacific 0–6–0 switchers received hand-me-down Vanderbilt tenders, many of them had the square oil tank narrowed to about the same width as the cylindrical water tank. Some others were given cylindrical oil tanks the same diameter as the water tanks. This practice of cutting down on the width of the fuel oil tank was also applied to 2–6–0 and 2–8–0 locomotives that were used as switchers.

The classic Vanderbilt design looks good when coupled to a Live Steam locomotive and is easy to fabricate. However, for the 1" scale Vanderbilt tender, something is lost since the seat is mounted above the foot boards which hides the top of the cylindrical water tank, thereby losing the full effect of the unusual tender shape. This is no problem with large 1½" scale tenders since the engineer usually sits slightly down into the oil section on top of the oil tank. Some of the later versions of the Vanderbilt tenders were really more square tender than Vanderbilt tender; however, call them what you will, they were good looking tenders.

THE CENTIPEDE TENDER

This unusual tender was used on the U.P., N.Y.C., G.N., and a few other roads. Its distinguishing characteristic other than its large size, was its wheel arrangement. If it was a locomotive, it would be classed as a 4–10–0; that is: 4-wheel leading truck and 10-wheel rigid-wheel base. The five rigid-wheel base axles are equalized as one system and mounted in the side frames of the cast steel tender bottom. They were most commonly used with 4–8–4 Northerns although in a few instances, they were found on heavy freight locomotives. They make a very striking tender when used for Live Steam behind a 4–8–4.



TENDER TYPES

Montreal Live Steamers are

Back in Operation

by Stanley H. Galloway
Secretary

PHOTOS BY A. W. LEGGETT

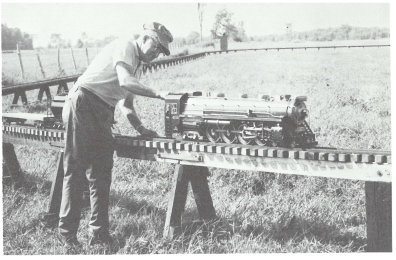
The Montreal Live Steamers enjoyed a little more pleasure this past summer and a little less work. Both the trestle track and the ground tracks were ready for operation, having weathered the winter remarkably well.

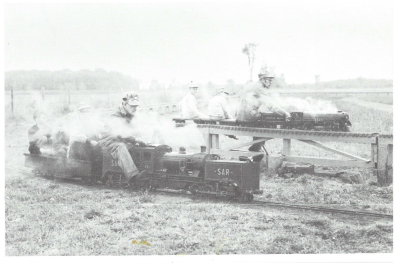
With the addition of electric power in the clubhouse, the ladies had something to work with and began to attend running days in surprising numbers. Needless to say, their presence was most welcome and the noon-day refreshments really made things pleasant.

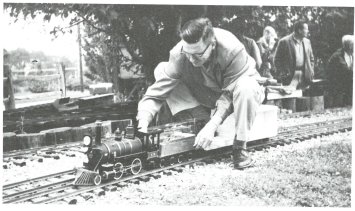
To ease up some of the chores of operation, rain water (which had been collected in barrels) was plentiful and there was even a choice of coal to burn! No more need to lug these necessities from home.

Live Steamer/Photographer Bill Leggett was on hand to record some of the activity on September 7th, just when club-president, Wally Scott, had some chores to attend to (1) in the firebox of his ¾" scale Canadian National 4–8–4! While it would appear that (2) Jim Turnbull with his 1½" scale South African Railways Beyer-Garratt and Bill Leggett, Jr., with Ernie Grow's 4–4–4 CPR *Jubilee* are engaged in a race, it was simply a case of Bill Leggett being in the right place with his camera at the right time. Apparently the coal smoke was bothering all three of Jim Turnbull's passengers (3) but it didn't cause them to leave. Maybe anti-pollution devices will be a future requirement!

Future plans call for finishing off the interior of the clubhouse and extending the three-rail ground track to a total length of about 2200 feet. The right-of-way is already marked out and some materials are on hand – including hundreds of ties and numerous lengths of aluminum rail donated by Joe Thomas of Ottawa. There are also some mounds of stone dust awaiting the attention of the pick-and-shovel crew in the spring!







building the RARITAN

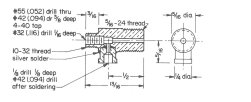
by William H. Morewood

Bill Scott with his RARITAN, the first to be built from Bill Morewood's design, on the Pennsylvania Live Steamers' track at Paoli, Pennsylvania.

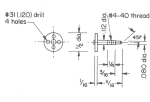
WILLIAM H. MOREWOOD

The parts included in this section are straight-forward machining operations and should require no special instructions.

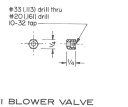
valves



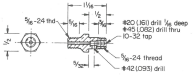
15-9 BLOWER VALVE BODY
Brass - 1 required



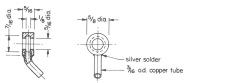
15-10 BLOWER VALVE STEM
Phosphor Bronze - 1 required



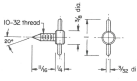
15-11 BLOWER VALVE GLAND NUT
Brass - 1 required



15-12 BOTTOM BLOW VALVE BODY
Brass - 1 required



15-14 BOTTOM BLOW VALVE OUTLET
Brass - 1 required



15-18 BOTTOM BLOW VALVE STEM
Phosphor Bronze - 1 required

15-13 NUT
Brass - 1 required

Live Steam

news

CHARLES ARTHUR COLE of Ventura, California, passed away on the 11th of November, 1969, at the age of 78.

A pioneer in the field of supplying the needs of Live Steamers, Charley formed Cole's Power Models in 1928 – the first operation of its kind in the western part of the United States. In addition to Live Steam Supplies, he carried electric O Gauge and model ship fittings.

Charley's Case Steam Traction Engine, which he scaled down from the original Case drawings, was the first American Steam Tractor on the market. He developed a simplified O Gauge power truck with the motor below the bolster. He produced a true Corliss Engine in miniature and a scale model of the "Holt 75" Caterpillar Gas Engine. The tiny electric light bulb that he carried was called a "Grain O'Wheat" bulb, a term which has since become generic. "Truscale" pipe fittings and water gauges as well as "All American" steam fittings and pressure gauges originated with Charley Cole.

A life-long resident of Ventura, Charles Cole retired from business in 1962 but continued to serve in an advisory capacity as his daughter-in-law, Betty A. Cole, took over the reins of Cole's Power Models.

Charley graduated from Stanford University as an Electrical Engineer, had served in World War I and had been a trustee of Ventura Junior College.

He is survived by his wife, Lillian, and his son, Charles, Jr. of Ventura; two daughters, Betty Cole of San Pedro and Mrs. May Thompson of Long Beach; and two grandchildren.

To his family are extended the condolences of all Live Steamers who will miss Charley and will remember him as one of the pioneers in this hobby.

PROGRESS ON JT&S

In readiness for the winter work season, the Joshua Tree & Southern Railroad Club now has the caboose and RPO and diner on rails at the club site . . . and therein lies a tale!

The Club's D&RGW Diner *Castle Peak* and SP RPO car #5217 left San Bernardino on June 20th for connection with the SP at Colton, California. At 6:00 a.m. on June 21st, four GE U28C locomotives coupled on ahead of the RPO, Diner and a string of empties and mixed freight, headed eastward to Indio. The "Mountain Local" was a mixed train that day with one passenger, Joel Tedder, aboard. Breakfast was served in the diner on this, its last run on rails. The train arrived at Garnet Siding in Palm Springs about 8:30 a.m. where the cars were backed to the end of the team track for highway movement.

Preparations for movement started on June 22nd and during the next three days the RPO was loaded on special dollies.

On June 25th the move was made with 50 wheels under the load and brakes on every wheel. On the highway a speed of 35 mph was reached, but on hills a helper truck was required – the equipment barely moved.

A 2½ hour delay occurred when the truckers made a wrong turn into the Joshua Tree National Monument and the time was taken up finding a place to turn around, getting permission to make the turn and executing the maneuver. National Park officials set aside an area where least damage would be done to the scenery and, being on soft ground, it took time!

Lights have been installed, and the RPO is being outfitted as a dormitory for work parties. Work will soon begin on trucks for the first 15" gauge cars, and Tom Coffey's Shay is getting nearer to completion. Conferences are being held to establish wheel and gauging standards for 15" gauge and actual track-laying will be under way soon.

New members are still welcome. If you would like more information about this activity, contact Joel Tedder at 4241 E. Live Oak Ave., C–7, Arcadia, California 91006.

NEED ANOTHER BLS DECAL?

If you have traded your car for a newer model in the past year, your BLS decal probably was included in the deal.

Don't overlook getting one for the new job from any of the BLS Secretaries or direct from Don Bauer who has moved to 10902 Roundelay Circle in Sun City, Arizona 85351. They are still good identification for only 50¢.

HIGH SCHOOL SHOP CLASS NEEDS LIVE STEAM

The boys in the Vocational Metal Class at Royal High School in Simi, California are building a 1½" scale Atlantic and have ordered issues of LIVE STEAM Magazine containing Joseph F. Nelson's series *So You Want To Build A Live Steam Locomotive* to be used as reference. By scrounging around, we were able to supply all except the August, September and October 1967 issues and the January, February and March 1968 issues.

If you should have any of these issues that you do not need or can supply them to the instructor so that copies can be made, please contact Douglas A. Kysar, Chairman of the Industrial Education Department, Royal High School, 1402 Royal Avenue, Simi, California 93065, phone 805 – 527-3232.

PLEASE – don't expect that "someone else" is going to do this, If *you* are able to help out, do it now!

WONDERFUL FALL MEET FOR NJLS

The Fall 1969 Meet of the New Jersey Live Steamers, the sixth such meet, was held on September 19, 20 and 21. It was attended by well over 200 of the Live Steam fraternity among whom were noted Larry Edwards of Green Bay, Wisconsin; Earl Nelson of Miami, Florida; Jim and Harry Turnbull of Montreal, Quebec; Leo Meyers of Clayton, Missouri and P. G. "Scotty" Scott of Marion, Iowa. Although no official roster of visiting locomotives and stationary engines was taken this time, there were at least twenty ¾", twenty 1" and twenty 1½" engines at the track for the three-day affair. The weather was just great – clear, cool and dry – for having all the fun possible with the steamers.

The NJLS Meets are now restricted to Live Steamers and their immediate families or very close friends. Cutting down on the crowd of "general public" has made the meets much more enjoyable, at least this is the reaction that NJLS has obtained from attendees. With this in mind, all future NJLS meets will be run likewise.

Leo Meyers showed some movies of his 1" scale *General* in Spain where it was used to make a commercial motion picture.

Everyone had a very good time and extends thanks to all who gave freely of their spare time to help out (especially the girls!)

NEWEST LIVE STEAM CLUB IN SACRAMENTO

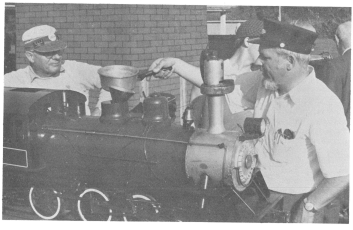
The Sacramento Valley Live Steamers with home offices in Sacramento, California, is the first such organization in the area in many years. The first meeting was held in September 1968 and since then membership has more than doubled in spite of the fact that six names had to be dropped. The present mailing list is 24 names long with about 60% attendance at meetings which are held at various members' homes. Nomal time is 1 PM on the third Sunday of each month.

The members have laid 60 feet of 4¾" track at the home of member Earl McKenzie. The track is planned to encircle the house and will be available to all members for steaming. Dual gauging for ¾" scale is possible if there is enough interest.

As a result of the organization, a number of members have made more progress on their engines in the last eight months than in the previous three to six years. Others have started to build what might otherwise have been no more than a pipe dream.

If you live in this area and like Live Steam, you belong in this organization. For more information contact David A. Hall, Secretary at 3517 Altamont Drive, Carmichael, CA 95608.

PIONEER VALLEY LIVE STEAMERS FALL MEET



1

Jim Maxheimer doesn't look overly confident (1) as Paul Culp fills the boiler of his engine the hard way! Walt Kleinfelder (2) keeps watch on the track ahead of his 0–6–0 and Frank DeSantis eases his new Southern 4–6–0 (3) through the switch while Halsted Park cautiously continues the activity on the 7¼" track. Gil Ritenburg made these shots at the PVLS Fall Meet in October.

4

3

FIRST RUN FOR NORTHERN ILLINOIS LIVE STEAMERS

1

2

Club Secretary, Bud Novy, was on hand with his camera September 14th when, after the NILS monthly business meeting, the first engines were run on the 3½" gauge club track. Fred Hanson (1) of South Bend had the honor of being the first engine on the track when he made the run with his ¾" scale 4–4–2. Everyone had a chance at throttle-pulling, including Bud Novy (2) with Matt Faiflie's 4–4–2 (Chuck Roehn is Bud's passenger, and that's Chuck, Jr., on the ground). Oakley Little and his Hudson (3) make the swing around the north loop to the end of track (4) where Act Hamman (on the trestle) and Jim Covey are hard at work extending the track. The 3½" gauge track will probably be finished first, the 7½" track is now under construction. The 4¾" gauge will get under way in the spring, although some shop work is being done on switches.

From the looks of the trackwork in these pictures, the Northern Illinois Live Steamers are going to have one of the most interesting facilities around.

3

4

Scheduled Meets

January

1 **FLORIDA NEW YEARS' MEET**
3½" – 4¾" gauges
Enos W. Yoder
1527 Ingram Avenue
Sarasota, Florida 33580

May

29 **BLS NATIONAL MEET**
30 Los Angeles Live Steamers
31 Griffith Park
3½" – 4¾" – 7½" gauges
Joel Carbin, Secretary
12723 Kittridge Street
North Hollywood, CA 91606

June

6 **IOWA MODEL STEAM ENGINEERS**
3½" – 4¾" – 7½" gauges
Pershing G. Scott
R.F.D. 1
Marion, Iowa 52302

September

12 **IOWA MODEL STEAM ENGINEERS**
13 3½" – 4¾" – 7½" gauges
Pershing G. Scott
R.F.D. 1
Marion, Iowa 52302

Regular Run Days

GOLDEN GATE LIVE STEAMERS
Every Sunday, weather permitting
2½" – 3½" – 4¾" – 7½"
Gordon French, Secretary
614 18th Avenue
Menlo Park, Calif. 94025
Phone 415 – 325-4209

RIVERSIDE LIVE STEAMERS
4th Saturday-Sunday each month
Hunter Park- Iowa & Columbia Ave.
Riverside, California
Francis H. Smith, Secretary
5536 Dewey Avenue
Riverside, California 92504
Phone 686-9533 or 683-9628

LOS ANGELES LIVE STEAMERS
1st Sunday each month
2½" – 4¾" – 7½"
Joel Carbin, Secretary
12723 Kittridge Street
North Hollywood, Calif. 91606

MONTREAL LIVE STEAMERS
1st Sunday of each month
3½" – 4¾" – 7½" gauges
S. H. Galloway, Secretary
53 Brentwood Road
Beaurepaire, Quebec, Canada

PIONEER VALLEY LIVE STEAMERS
2nd Sunday each month
3½" – 4¾" – 7½"
Beaton W. Barnfather, Secretary
3 Fleetwood Drive
Sandy Hook, Conn. 06482

RAILROADERS CLUB OF SAN ANTONIO
3rd Sunday each month, weather permitting
7½" gauge
Cas Beck
2626 McCullough Avenue
San Antonio, Texas 78212

JAMUL VALLEY RAILROAD
3rd Sunday each month
7½" gauge
Harry F. Haas
Route 1, Box 47 A
Jamul, California 92035

SOUTHERN CALIFORNIA LIVE STEAM CLUB
3rd Sunday each month
3½" – 4¾" – 7½"
K. G. Kepner, Secretary
2764 Maple
Rialto, California 92376

WABASH, FRISCO & PACIFIC
Every Sunday
12" gauge
Grand and First Streets
0.4 miles south of Post Office
Glencoe, Missouri

mail stop

STANDARDIZE AIR FITTINGS

Some of the clubs have compressed air available at steaming tracks, but my question is: "What type or style of fittings are in use?"

Compressed air for steam-raising has several advantages. First: a compressed-air blower is much more compact than an electrical blower and has a wide range of draft on the fire. This type of blower is also immune to the heat of stack gasses.

If a standard was to be proposed, I would like to nominate the standard automobile tire valve with screw-type hose connection. If a club supplies a length of hose with screw connector, the Live Steamer merely needs an auto tubeless tire type valve (used ones *free* at most any service station). This usually has a rubber piece molded on one end and this is removed, after which it can be silver soldered to a short length of copper tube. The tube is then bent like the letter "J" with the top portion bent over to rest on the stack. (See *building the RARITAN*, detail 25–15, page 10, LS 7/69. Ed.) Locomotives with large diameter stacks can use a ring blower or a connection can be made to the loco's own blower.

In addition, locos with fired pumps (steam driven) can use compressed air to fill the boiler, saving a lot of work at the tender hand pump. Locomotives with steam feed pumps can also be run on compressed air to apply the annual hydrostatic boiler test.

HAROLD CROUCH
717 COLTON AVENUE
NEWARK, NY 14513

Flat River & Southern R.R.
commercial 7½-in. gauge
Visitors Always Welcome
Open Thursday thru Sunday
Other Times: 842-0523 or 848-4496
501 Northlake Boulevard
North Palm Beach, Florida

LOVE THAT 3/4" SCALE!

Bob Maynard's bit for ¾" scale was very good. I concur all the way. Believe it or not, I can go to a meet with two 3/4" scale engines in carrying crates, two tenders, riding car, tool box and a wooden box for oils, start-up blower, etc., and all this in an MGB/GT with none of the passenger room usurped! Good packing? Some – but more good engine size. The big ones may "wool" more but give me the bark of my 0–4–0 as she takes the uphill grade on the North Curve at Southwick!

WILLIAM I. TREADWAY
352 BREWSTER ROAD
BRISTOL, CT 06010

BRASS FINISHING METHODS?

For the past twelve years I have been building a very elaborate ¾" scale NYC Hudson. All fittings, cow catcher, boiler jacket, cab and tender are made from brass. The locomotive and tender are completely erected and are now ready for painting. I have had many suggestions as to how the surface should be treated, but none seems to be entirely satisfactory. Before his death, R. E. "Bobby" Thompson had expressed the possibility of plating the parts with cadmium (phosphate finish), but this appears monumental. I would sincerely appreciate any help in locating a finish that will give a good job of maintaining detail and stand up to running.

JOHN M. KESTER, M.D.
4089 ARBOR WAY
CHARLOTTE, NC 28211

ON YOUR TOES, STAFF (BOTH OF YOU!)

If for any reason you are not able to get the subscriptions back on time, I will be forced not to renew after this time.

O. A. RITCH
1918 WINTER STREET
CHARLOTTE, NC 28205

ON THE OTHER HAND . . .

You have my immense admiration! Your announced three-week tight schedule is going to get "the sheet" up to date (you planned that, of course) and it is going to be one of the decade's publishing miracles. Think I should shout it to the "regular" magazine people as just that.

Bravo, Ole', Huzzah, ... !!!!

TEMPLE NIETER
707 SHERIDAN ROAD
EVANSTON, ILL. 60202

I would like to state what a wonderful magazine you are putting out. You have done the impossible and are making a go of it. Not only the magazine, but you are responsible for clubs and Live Steam tracks springing up like mushrooms all over the U.S.A., something no one else could possibly accomplish!

WILLIAM F. WHITMAN
189 BAL BAY DRIVE
BAL HARBOUR, FLA. 33154

NEW PATTERN LIST NO. 7
¾" – 1" – 1½" scale locomotives and horizontal stationary engine. Send 25¢ with self-addressed #10 envelope with 12¢ postage to
Live Steam Pattern Pool
962 Greenland, Portsmouth, N. H., 03801

ACCURATE TO SCALE
115 lb. A.R.E.A. RAIL
1½"Scale 16¢ per foot
2½ 25¢ for sample
Paul B. Culp
617 Fernhowe Street
Philadelphia, Pa. 19111
Phone 215 – 342-9552

RUTLAND DRAWINGS
1½" scale elevations and sections of RUTLAND RAILROAD class F-21 4–6–0 engines. For information write to:
Walter M. Alten
962 Greenland Road
Portsmouth, N. H., 03801

LOCOMOTIVES BUILT TO ORDER
Machined to any stage
Tom's Machine & Engineering Co.
808 McPhaul Street
Austin, Texas 78758

¾"/4" – 1½" Scale
Castings, Blueprints and Materials
16 Engines in CATALOG #3 – $1.00
FRIENDS MODELS
R.F.D. Topsfield. Mass. 01983

NOTICE
Receipt of many new drawings makes old list obsolete. Watch for NEW ENLARGED CATALOG in these ads shortly.
WILLIAM DYKEMAN
890 Bay Ave., Bathurst, N.B., Canada

...from the cupola

First thing we want to say is a very sincere and sincere "Thank You" from Doris, Paul and myself for the hundreds upon hundreds of kind words that we have received in the past few months with your renewals. Wish there was time to reply to every one of them. You can't possibly imagine what a lift they provide around here!

Also, we would like to extend our best wishes to each of you for the approaching Christmas Season, with our express desire that the Joy, the Peace and the Happiness of The Season will be with you all through the coming year.

We are looking forward to meeting many more Live Steamers in 1970 too. With the National BLS Meet in May, we feel it would be wise not to start milking some of the neighbor's cows to get our "shaking hand" in condition for those days!

We did manage to take in a few meets during 1969 and hope to get to some more in 1970. Little by little we will get to make the rounds. Thanks to the many clubs who have invited us to attend their activities ... and thanks, too, for understanding that we couldn't possibly get to all of them in one year.

We have a couple of names we would like to check on with you: Jack Keffer, who operated "J & J Models" in the Los Angeles area and advertised in this magazine, sent us a new address to insert in his ad but all mail to that address was returned marked, "Moved, Left No Forwarding Address." We have had some report that he moved to Pennsylvania, but nothing more than that.

The other is a Richard H. Nadel who was at 472 Gramatan Ave., Mt. Vernon, New York. Mr. Nadel distributed a wonderful film about the NYC Hudson which we would like to have in our collection as, we imagine, other Live Steamers would.

– W. C. F. –

Live Steam

BOUND VOLUME TWO

includes all 1968 issues

AVAILABLE NOW – $12.00

Durable green cloth binding, gold stamped with LIVE STEAM logo and extensively cross-indexed.

LIVE STEAM

Post Office Box 635

Cadillac, Michigan 49601

The Extra Board

Fifteen words or less - not including name or address: $2.00 in advance, 10¢ per word for additional copy. No commercial ads of any kind accepted for this column.

WANTED

Old Electric and Wind-up trains, also quality scale "O" gauge. Top cash. Al Staufer, Route 4, Medina, OH 44256.

Information on Baldwin Type "Rushton" two wheel, swing link, outside bearing trailing truck and truck frame. John G. May 25426 117 Place SE, Kent, WA 98031.

FOR SALE

Little Engines Atlantic and Pacific 1½" scale. Each consists of frame, cradle, driving wheels, spring rigging, lead trucks, trailing trucks, pilot and pilot beam with front coupler. No cylinder blocks, rods or valve gear assemblies. Send inquiries to Mrs. Leo Renfroe, 605 Pine, West Memphis, Arkansas 72501.

New small ball bearings, 3/8 o.d. 1/8 i.d. and 5/8 o.d. ¼ i.d., five for $1, less than 1/10th list. Lester Lehman, R.D. 2, Red Lion, PA 17356.

Highest quality aluminum rail for ¾" and 1¼" scale, 5/8" high, matches all other ¾"–1¼" rail. Michael Condax, 515 Chestnut, Moorestown, NJ 08057.

Complete steam powered workshop with lathe, 2 vertical engines, 2 generators and 2 air compressors. Pre-date 1900, excellent condition. Further details from Robert F. Clapp, 1481 Terracita Dr., San Bernardino, CA 92404.

12" gauge precision built 3400 class South Pac Steam locomotive, tender and six cars and new rail. Send $1 for photos and details. K. E. Reynolds, 110 S. Tyler Rd., Wichita, KS 67209

LIVE STEAM

Back Issues Available

☐	September 1966	☐	October 1968
☐	February 1967	☐	November 1968
☐	March 1967	☐	December 1968
☐	April 1967	☐	January 1969
☐	May 1967	☐	February 1969
☐	June 1967	☐	March 1969
☐	July 1967	☐	April 1969
☐	April 1968	☐	May 1969
☐	May 1968	☐	June 1969
☐	June 1968	☐	July 1969
☐	July 1968	☐	August 1969
☐	August 1968	☐	September 1969
☐	September 1968	☐	October 1969

1966–1967 issues – 35¢ each

1968–1969 issues – 45¢ each

LIVE STEAM Magazine

Post Office Box 635

Cadillac, Michigan 49601

FINEST QUALITY HARD-TO-FIND TOOLS

NEW 1970 CATALOG

Unique collection of hard-to-find versatile hand tools and small power tools rarely found in stores or other catalogs. Large selection of micrometers, precision tweezers, jewelers' and electronic pliers, flexible-shaft machines, endless hacksaw, diamond glass cutter, soldering tips, carbide hacksaw blades, silver solder, micro-miniature tools and scores of other fascinating items to make projects easier, more fun. All are top-quality tools. Used extensively by Live Steamers, model makers, machinists, woodworkers. Money back guarantee. Send 25¢.

BROOKSTONE CO.

12996 River Road, Worthington, Mass. 01098

BLAST FURNACE 2400 F

SINCE 1938

Live Steamers • Hobbyists Make your own castings of any metal from cast iron down to lead and zinc. Available in 6 sizes, 1⅞ to 50 lbs. Complete units from $30.40 up. $162. Send 25¢ for circular – refundable.

KANSAS CITY SPECIALTIES CO., Dept. "M" Joplin, Missouri 64801

MODEL BOILERS

Built and Repaired

Also Boiler Parts Formed Cut

MODEL BOILERS

Box 178 Ventura, California 93001

Black line prints from original Cooke, Manchester and Hinkley Island Works traction engines. Send 50¢ for the lists of drawings.

C. A. PURINTON

R.F.D. Boxford, Mass. 01921

1½" scale trucks, couplers, stake pockets, flags, drivers, etc. Send 25¢ for photo and information

EVERT BRUMLEY

Route #4, Box 222

Winchester, Indiana 47394

3/4" Scale NYC Hudson

Castings, drawings, freight trucks, wheels, bolsters, springs. Write for list.

CARL HOFFMAN

25 Thornridge Crescent

Kitchener, Ontario, Canada

Live Steam

Locomotives

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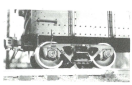

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